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ABSTRACT

This study explored middle school teachers' perspectives on and expectations of adolescence and puberty, using observations and interviews of 15 teachers in two Japanese middle schools and two United States (U.S.) middle schools, as well as a survey of teachers in selected schools in both nations. Teachers in the U.S. described puberty as being longer for males than for females. Among Japanese teachers a tighter fit was observed between periods of puberty and rebellion, while U.S. teachers saw adolescent rebellion as ending well after the end of puberty. Analysis of language and discourse suggested that Japanese words for middle school students imply compliance, energy, and active engagement in study and clubs; Japanese informants predominantly viewed middle school students as still being children, and were never expected to engage in dating. The social construct of hormones as an intoxicating and distracting force was common among U.S. teachers, while Japanese teachers did not link puberty with hormones or disruptive behavior with sexual energy. Implications of these cultural differences for the effects teacher expectations have on student performance and behavior are discussed. (Contains 24 references.) (PB)

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Middle School Teachers' Theories of Puberty

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Introduction

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In both the U.S. and Japan, is considered to herald the onset of adolescence, a time which is popularly believed to be one of rebellion and disruption. Despite a considerable body of evidence which negate these popular stereotypes (Bandura, 1964; Kett, 1977; Simmons and Blythe, 1987) the general public still links puberty and disruption. As puberty is a universal human developmental process, it is a concrete starting point to investigate how general expectations for behavior in early adolescence may diverge in different countries. Because a wide body of historical and anthropological work suggests that the adolescent experience is highly impacted by culture (Van gennep, Kett, 1977; Schlegel and Barry,) the impact of culture on the pubertal experience cannot be ignored.

Adults have great power in structuring the behavior of children and young adolescents. Kett (1977) has argued that the American norms of adolescent behavior have been largely disseminated via the public school. In order to investigate the possible effects of culture on puberty and early adolescence this study will focus on teachers' beliefs and expectations for puberty. In both societies, it is unclear how teachers see the relationship between puberty, adolescence and rebellion. Moreover, attributed patterns of causality are potentially powerful factors in determining how students in schools make sense of and react to the physiological changes they are undergoing.

The Social Construction of Adolescence

Despite a common underpinning of human developmental biology, the period between childhood and adulthood which we designate as "adolescence" in modern, western societies is

constructed in widely different ways in other societies, and in a minority of cases is actually non-existent (Cohen, 1964; Schlegel and Barry, 1991). Studies of the different expectations for behavior during these various liminal periods is rife with debate between social constructivists and biological determinists. The most famous study of different expectations for adolescent behavior (Mead, 1928) has for some years been discredited due to Freemans' analysis (Freeman, 1983). However, further investigation of adolescence in Samoa and a substantial review of both Mead and Freeman's work have revealed substantial errors in both while supporting some of the findings of both (Holmes, 1987). Holmes' work refutes the biological determinist aspect and suggests that adolescence is indeed a highly impacted by culture.

In terms of the educational impact, these theories are important to understanding how students in modern industrial societies react to schooling. For example, Kett (1977) has argued that modern American adolescence is founded on the universalized schooling which came into practice in the late 1800's: an essentially white, middle-class paradigm of adolescence was created and popularized via the school system. Hollingshead (1975) and Stinchcombe (1964) both document the central role that adolescent rebellion play in the school cultures of 20th century America. Ethnographies of American middle schools further substantiate this phenomena for early adolescence (Everhard, 1983; Abiko, 1987).

Puberty and early adolescence

Significant research into the relationship between puberty and the behavior of young adolescents in the United States suggests that

links between the biological processes and academic competence, social acceptance or self-esteem are weak or non-existent in the American context (Simmons and Blythe, 1987; Dubas, Graber and Petersen, 1991;) suggests that puberty itself is not a factor. However, these researchers did find that there is significant association between pubertal timing and various social and emotional measures. Dubas, Graber and Petersen (1991: 454-455) noted that: "...the effects of pubertal development on the achievement measures are based on an individual's relative standing in terms of physical development rather than the stage of development through which they are passing." That is, if a child is an early or late maturer for their cohort, there can be significant ramifications in the young adolescents behavior or emotional states -- a point suggested by (Brooks-Gunn and Reiter, 1990).

The implication is that social expectations make pubertal development significant in various ways. Students who are perceived to be outside the norm are subject to treatment in different ways and this differential treatment may foster different behaviors with possible long-term consequences. The social construction of identity at and after puberty then, again and again appears to be the most significant factor in explaining adolescent behavior. Dornbusch, et al. (1981) found that social factors based on perceptions of appropriate behavior were more significant than actual levels of sexual maturation in explaining dating behavior. Scott, Arthur, Panizo and Owen (1989) show African-American young adolescents have significantly different perceptions of menarche than Euro-Americans. Simmons, Black and Zhou (1991) suggest that

ethnicity also plays a key role in determining the extent to which young adolescents begin displaying behavior consistent with the popular stereotypes of adolescence.

There is also evidence to suggest that within the American cultural milieu itself, teachers and their students may have very different, perhaps even conflicting views about what is normal behavior. And, this conflict in beliefs about appropriate behavior may result in significant difficulties for young adolescents. Burton (1993: 8) recorded the sentiments of a 15 year-old boy in an African-American, inner-city neighborhood:

> Sometimes I just don't believe how this school operates and thinks about us. Here I am a grown man. I take care of my mother and have raised my sisters. Then I come here and this know-nothing teacher treat me like I'm some dumb kid with no responsibilities. I am so frustrated. They are trying to make me something that I am not. Don't they understand I'm a man and I been a man longer than they been a woman."

The role of teachers

But studies have largely ignored the role that teachers may play in constructing the adolescent experience. Abiko (1987) did note that teachers' expectations for behavior appeared to be a significant factor in explaining the conditions of early adolescence in American middle schools. Teachers are the most significant adult actors in schools, yet little is know about what teachers believe to be normal behavior for adolescence. Clearly, if teachers have deeply held beliefs about adolescence, their construction of the classroom and school environment would have a substantial impact on the overall adolescent experience.

Teacher beliefs about puberty and rebellion in the U.S. and Japan are a rich set of data which allow a broad comparative perspective on how the early adolescent experience is structured in the schools in each country. By investigating what teachers believe, we can gain significant insights into the cultural forces that affect the behaviors of young adolescents in both nations. Teacher beliefs about the relation between puberty, rebellion and adolescence can help to determine in what ways the experience of early adolescence is constructed in different ways, and may lead to identifying key stereotypes of beliefs which have salubrious or deleterious effects on academic achievement, social integration and self-concept.

Field Site, Sample And Methods

From 1986 to 1989 I worked as an assistant homeroom teacher in the middle schools and high schools of Kotani City in Yamagawa prefecture.[1] Kotani, (population 80,000), is located on the main island of Honshu and lies astride a major rail line about one-and-a-half hours from Kyoto. During 1989 and 1993 I returned to Kotani three times to conduct research on how homeroom teachers conducted student guidance. During these periods, I "shadowed" a total of 15 teachers in two large middle schools. I also conducted a similar study of teacher involvement in counseling in two U.S. schools (LeTendre, 1994). During the fieldwork, I recorded 45 hour-long interviews with teachers, administrators and local officials in both countries; participated in teachers' meetings, guidance meetings, school planning

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[1]All proper names have been altered to protect the anonymity of the subjects.

sessions and extra-curricular trips. Throughout the day I observed both classes and whole-class guidance sessions at the schools.

In Japan, I also attended regional research conferences on guidance processes and gathered the year-long placement counseling summaries from 60 middle schools within the prefecture as well as from schools in adjacent prefectures. I traveled to middle schools in Nagoya (Japan's fourth largest city) and Kanagawa prefecture (near Tokyo) to interview teachers about guidance matters and collect further materials. While some regional differences were discovered, the basic mechanisms of selection, the types of activities, the goals emphasized and the kinds of attitudes teachers hoped would be inculcated were strikingly similar.

At the end of my fieldwork I distributed a survey designed to probe teacher's beliefs about puberty. The survey was distributed to teachers in Kotani and Nagoya, a non-random, convenience sample, but nonetheless, one which sampled a broader base of Japanese opinions than the field observations. In the U.S. I distributed the survey to teachers in two schools in California, and have added to the U.S. sample from my student teachers here in Georgia. the questions provided insightful data about the way that teachers understood puberty. I will begin by analyzing the survey material and then contextualize these findings via a thematic analysis of the qualitative material.

Onset of Puberty and Rebellion

Puberty marks the onset of adolescence in American culture, and in both cultures, puberty is linked to a growth spurt, sexual maturation, and a period of rebellion. Puberty, it would seem, is the

best bet for finding some common ground on which to begin a comparison of teachers' conceptions of adolescence. But, aside from menarche, there are few readily discernible and consistent indicators of the onset of puberty. The appearance of genital hair, growth of genitalia or breast development are processes that occur over a period of months or years. Van Gennep (1960:66-68) discusses in some detail the difficulty of defining concrete external signs of puberty. And Rierdan et al. (1989) argue that traits associated with puberty -- breast development and menarche -- may occur up to two years apart.

"When is puberty," is both a cultural and a biological question. Teachers in the U.S. attribute behavior in children to hormonal processes even when there are no visible signs of puberty: a 7th grade boy with no facial hair and a decidedly child-like voice can be described by teachers to "have entered puberty" and be subject to "raging hormones" if his behavior is highly disruptive and he evinces an "interest" in girls.[2]

The survey data indicate that teachers' beliefs about when and how long puberty last differ significantly between the two countries. In Table 1 I have reproduced the means for the onset of puberty and a period of rebellion. In the case of puberty, American teachers clearly see puberty as beginning earlier. There is about one and a half years difference between the means for the onset of puberty for both boys and girls. However, there is no significant difference between means for the onset of the period of rebellion. This may be due, in

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[2]Van Gennep (1960:65) argues that "physiological puberty and 'social puberty' are essentially different and only rarely converge."

part, to the larger standard deviations for this variable. The belief in earlier puberty in the U.S. may reflect the fact that menarche occurs, on average, slightly earlier in the U.S. than in other industrialized countries (Tanner, 1971).

Table 1 about here

There is, interestingly, no significant differences between the mean end of pubertal timing for boys and girls between the U.S. and Japanese samples (Table 2). So, while American teachers think puberty starts earlier, teachers in both countries see it as ending about the same time. However, there is significant differences in terms of end time for the period of rebellion. On balance, American teachers thought that rebellion ended about three years later than the Japanese teachers. The rebellious phase was seen to last, in the U.S. from the near the onset of puberty into the mid-teens.

Table 2 about here

These differences are reflected in the mean length of time for puberty and rebellion. Puberty is believed to be longer for boys and girls by U.S. teachers (see Table 3). This is significant, because while onset of menarche may vary due to a variety of social factors, the most significant being differences between developed and developing nations, there is no data to suggest that the length of pubertal processes vary between nations or ethnic groups. as well is the period of rebellion. In both cases, the Japanese believe that children go through significantly shorter periods. In the case of rebellions, the U.S. teachers thought the period lasted about two years longer than the Japanese teachers.

Table 3 about here

Table 4 contains a correlations matrix for timing of the onset an conclusion of puberty and periods of rebellion. In Japan, there is a significant correlation between all the onset of puberty and a period of rebellion for both boys and girls (.289 and .308 respectively). Moreover, there is a very high correlation between the end of puberty and the end of the rebellious period for girls in boys (.465 and .505). On the other hand, none of the correlations for the U.S. were significant. The correlations for the onset of puberty and rebellion for girls and boys were .247 and .299 The correlations for the conclusion of puberty and rebellion were .181 and .137 respectively.

This suggests that in Japan there is a tighter fit between when teachers think children are going through puberty and when they rebel than in the U.S. In the U.S. the onset of puberty is remarkably early, and the conclusion of the rebellious period comes well after what teachers perceive to be the end of puberty. This longer period of rebellion in the U.S. is striking and may be associated with American attitudes that suggest that adolescence is a stormy or troubled period.

Thematic Analysis

An analysis of the content of teacher speech recorded during observations or interviews showed major differences between Japan and the U.S. In teacher's day-to-day discussion, as well as in interviews, teachers focused on very different aspects of adolescence and puberty. These differences suggest that cultural expectations for behavior at puberty diverge in the two nations, and are in line with the preliminary survey results.

<u>School Identity and Adolescence in the Japanese Life cycle</u>

Where does adolescence fit into the modern Japanese life cycle? First of all, the very terms "adolescent" and "teen-ager" are problematic because these terms evoke rather vague images for most Japanese. White (1987) notes that the loan word "teenager" (cheena jya) is a recent import, although it has gained wider acceptance in urban areas. Indigenous terms for adolescence (seinenki; seishunki, seishōnen) have connotations more like our "youth" or the German jugend. And, teachers commonly refer to students in middle school as children (kodomo). It appears that adolescence has a different place in the Japanese life cycle than it does in Western nations.

Looking at other terms that teachers and parents commonly use to describe students between the ages of 12 and 19, we begin to see the powerful effect the school system has on the life cycle. Teachers and parents use "student" (seito) much in the same way that American parents would use the term. But, they also commonly use "middle school student" (chūgakusei) and "high school student" (kōkōsei). For the Japanese, these terms are associated with distinct roles in the modern Japanese life cycle.

The image of a middle school student is associated puberty, a growing sense of social responsibility as well as a tendency to rebel. Teachers commonly encourage students to behave in a manner appropriate to a middle school student (chūgakuseirashii). By this they mean a student who is compliant (sunao), energetic and actively engaged in study and clubs. Middle school, in conventional wisdom, is a time of intense physical and mental activity. And, although most are experiencing puberty, middle school students are still considered

children. Middle school students in Japan, teachers and parents said, don't date.

High school student carries images of independence, an expansion of social contacts, as well as a time of preparing for entry into the adult world. Due to the range of high school experiences, the image is more diffuse than for middle school. For students who are headed on to college, the ideal high school student is serious (majime). By this, most adults mean serious about studying and getting into a good school. For all parents, entry into high school signifies an increased capacity of responsibility. Parents do not need to be so concerned about school performance and can reduce their direct involvement in their children's schooling.

The Hormonal Storyline.

The most dramatic difference between the two groups of teachers centers around what I have called the "hormonal storyline." Puberty is tightly linked to adolescence in the U.S. by a belief that hormones, which turn on at puberty, produce a strong sex drive and emotional instability. This link appears to be missing in Japan, and as a result, Japanese teachers describe different ideal assumptions about sexual maturity and sexual consciousness. The belief in the effect of hormones, or lack there of, is a significant factor in overall beliefs in the nature of the life course. The presence of hormones, American teachers say, accounts for many of the behaviors characteristic to adolescence. This quote, from a 28 year-old 7th grade teacher is typical of the use of the hormonal storyline.

> The last two weeks he's really been acting up. Must be his hormones acting

> up. He's a really sweet kid. You don't want to suppress that personality coming out, but.....

American teachers appeared to share , we are all aware of the close association between hormones and irresponsible behavior. In a satirical poem written by a middle school teacher and published in the Middle School Journal, the author eloquently mocks the trials of puberty and hormones.[3] The author weaves together many of problems attributed to adolescents in America: peer consciousness, rebellion, self-doubt and self-seeking. Driving all of this are the "cursed" hormones that "drip and seep." Hormones, then, are the modern rational for the turbulence of adolescence. Hormones are the reason, as one teacher put it, adolescents are "so squirrely."

American teachers commonly refer to hormones as the source of a child's inattention, misbehavior, inability to concentrate, poor grades, obsession with the opposite sex or aggressive behavior. Hormones are talked about in the way we might talk about a chemical ingested into the body: a substance that produces strange, ungovernable behavior. The child is at the mercy of bio-physical processes he or she cannot control. While teachers did not think every child experienced a dramatic puberty, they expressed a belief that all children were affected by puberty and undergoing a "traumatic" adolescence was "normal."

Teachers assumed that student lack of sexual control was prima facie evidence of the effect of hormones. In talking about student sexual activity a male teacher in his late 40's angrily noted

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[3]The author here equates the development of secondary sex characteristics with puberty and places the onset of puberty at 10 or 12.

that a 14-year old former student of his was now pregnant, despite the fact that he had asked the mother to put the girl "on the pill." The Middle School Guide for the U.S. school district officially states that "chemical and hormonal imbalance during transcecence trigger emotions that are little understood by the transcecent." For American teachers at, once hormones turn on, children can't control themselves.[4]

No hormones

The hormonal storyline is simply missing in the Japanese schools.[5] Japanese teachers are aware that children are developing a sexual consciousness (ishiki), and are interested in the members of the opposite sex. A 50 year old female teacher remarked that about half of the students can get boy or girl "crazy" at sometime in middle school and that this may temporarily affect their studies. But, like other Japanese teachers, this teacher did not believe that puberty automatically impeded a child's concentration or motivation. The heightened awareness of sexuality which all students experienced did not dictate that all students would go "boi kureiji" or "garu kureiji".

For Japanese teachers, puberty is associated with both an awareness of sexuality and curiosity about the opposite sex, but evidence of uncontrollable sexual attraction was seen as abnormal. Not only did teachers fail to link puberty and hormones, they did not

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[4]Like Fine (1988) I found no official discourse on sexual desire in American schools, I did find frequent informal discourse between teachers about student's sexual desire. The topic of student sexual attraction or sexual activity usually occurred with expressions of fears about pregnancy or sexually transmitted disease.

[5]The only Japanese educator to use the term "hormonal imbalance" (horumon imbaransu) was Mrs. Banba, the Furukawa school nurse, during an interview on psychological stress.

tend to link disruptive behavior with sexual energy. In only one case that I observed -- a boy considered to have severe emotional problems -- was disruptive behavior attributed to sexual attraction or sexual problems.

There is a concern among Japanese teachers that at the high school and middle school level students who are discouraged in school may become attracted to "soft porn" -- various types of cartoon pornography available in Japan. White (1993:182-183) notes the widespread availability of these pornographic cartons. The Youth Counseling Center in Kotani in 1992 issued a warning to the schools that certain pornographic books were being sold under covers that made them appear to be novels. However, in interviews teachers linked the use of pornography with severe mental (seishin) and family problems much in the way Wagatsuma and DeVos (1984) describe. Japanese teachers assumed that "normal" middle schoolers would still be "innocent" (junsui) in sexual matters.

Conclusion

In the U.S. puberty marks the child's entrance into an altered state: adolescence where an adult-like, hyper-sexual drive was coupled with a mind not yet serious enough to take on adult responsibilities. Puberty in Japan, as one veteran teacher declared, was "blue skies, tanoshii." This lack of a hormonal storyline is perhaps the reason that few Japanese teachers interpreted student problems as stemming from the nature of the child. The time of middle school was not dominated by a theory of "hormones," but by a concern for nayami (troubles, worries) which arose due to the

constraints students faced in the educational system, the pressures of the exams and the "affluent society."

In Japan, the life course is highly impacted by specific school roles. The phenomena of puberty and adolescent rebellion are associated with he three years of middle school, and considered abnormal in the later years in high school. In the U.S. adolescence and the teen-age years are the most salient social categories given the weak school identities evidenced in the U.S. Puberty and adolescent rebellion are therefor expected to be more extended and more diffuse than they would be in Japan.

The fact that the Japanese teachers do not link puberty with the generalized stage of youth is a significant feature in their view of the normal life course. Since Japanese do not appear to have the same link between puberty and the onset of adolescence that American cultural logic provides, then we might well expect to find behavior that appears "adolescent" at very different times and places in the life course.

Significant differences in teacher beliefs point to the fact that determinant of adolescent behavior in any given country may be highly impacted not only by broad beliefs but by the interaction of the organization of schooling and the expectations that teachers have for students. While the causal link between teacher beliefs and adolescent behavior or emotional states is still unclear, it is an area of significant practical and theoretical interest that demands future study.

Table 1
Means for onset of puberty and period of rebellion. (Standard deviations in parentheses)

	ONSET FOR			
	PUBERTY GIRLS	PUBERTY BOYS	REBELLION GIRLS	REBELLION BOYS
Japan	11.7	12.9	12.1	12.7
	(1.35)	(1.39)	(1.53)	(1.62)
U.S.	10.1	11.7	11.6	11.8
	(0.77)	(0.96)	(2.30)	2.62
D.F.	141	141	117	117
P	0.000	0.000	.206	.021
Japan (N)	79	79	79	79
US (N)	64	64	40	40

Table 2

Means for conclusion of puberty and period of rebellion. (Standard deviations in parentheses)

	CONCLUSION FOR			
	PUBERTY GIRLS	PUBERTY BOYS	REBELLION GIRLS	REBELLION BOYS
Japan	15.5 (2.62)	16.4 (2.44)	15.1 (2.14)	15.6 (2.36)
U.S.	15.2 (1.70)	17.1 (2.19)	16.4 (2.0)	17.2 (1.99)
D.F.	141	141	117	117
P	.454	.082	0.001	0.000
Japan (N)	79	79	79	79
US (N)	64	64	40	40

Table 3
Means for duration of puberty and period of rebellion. (Standard deviations in parentheses)

	PUBERTY GIRLS	PUBERTY BOYS	REBELLION GIRL	REBELLION BOY
Japan	3.8	3.5	3.0	3.0
	(2.56)	(2.45)	(2.14)	(2.19)
U.S.	5.09	5.3	4.9	5.48
	(1.97)	(2.56)	(3.63)	(3.83)
D.F.	141	142	117	117
P	0.002	.000	0.000	0.00
Japan (N)	79	79	79	79
US (N)	64	65	41	40

Table 4
Correlation matrix of major variables.

Japan

	V1	V2	V3	V4	V5	V6	V7
V1	1.000						
V2	0.300***	1.000					
V3	0.650*	0.158	1.000				
V4	0.201	0.929**	0.272	1.000			
V5	0.289*	0.003	0.089	-0.056	1.000		
V6	0.033	0.465**	0.004	0.479**	0.357**	1.000	
V7	0.278	0.106	0.308**	0.142	0.616**	0.273	
V8	-0.030	0.403**	0.097	0.505 **	0.122	0.796**	0.440**

DF= 28, NUMBER OF OBSERVATIONS: 79
* = p < .01, **=p < .001

United States

	V1	V2	V3	V4	V5	V6	V7
V1	1.000						
V2	-0.049	1.000					
V3	0.550**	0.023	1.000				
V4	-0.102	0.848**	0.058	1.000			
V5	0.247	0.104	0.260	0.122	1.000		
V6	-0.028	0.181	-0.159	0.166	-0.426**	1.000	
V7	0.133	0.137	0.299	0.190	0.910**	-0.469**	1.000
V8	-0.037	0.173	-0.162	0.137	-0.383	0.812**	-0.367**

DF= 28, NUMBER OF OBSERVATIONS: 40
* = p < .01, **=p < .001

Variable Definitions

V1 = Onset of puberty for girls
V2 = Conclusion of puberty for girls
V3 = Onset of puberty for boys
V4 = Conclusion of puberty for boys
V5 = Onset of rebellious period for girls
V6 = Conclusion of rebellious period for girls
V7 = Onset of rebellious period for boys
V8 = Conclusion of rebellious period for boys

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